**GROUP E**

**Consider a scenario for Hospital to cater services to different kinds of patients as Serious**

**(top priority), b) non-serious (medium priority), c) General Checkup (Least priority).**

**Implement the priority queue to cater services to the patients.**

#include <iostream>

#include <queue>

#include <string>

struct Patient {

std::string name;

int priority;

bool operator<(const Patient& other) const {

return priority > other.priority; // Higher priority patients are served first

}

};

int main() {

// Priority queue to store patients

std::priority\_queue<Patient> hospitalQueue;

Patient patient1 = { "VEDANT", 2 }; // Non-serious

Patient patient2 = { "PRANAV", 1 }; // Serious

Patient patient3 = { "SHAZ", 3 }; // General Checkup

hospitalQueue.push(patient1);

hospitalQueue.push(patient2);

hospitalQueue.push(patient3);

while (!hospitalQueue.empty()) {

Patient servedPatient = hospitalQueue.top();

hospitalQueue.pop();

std::cout << "Serving patient: " << servedPatient.name << std::endl;

}

return 0;

}

**OUTPUT:**

**Serving patient: VEDANT**

**Serving patient: PRANAV**

**Serving patient: SHAZ**